Sediment Management Area				Data Gaps														
				Nature and Extent of Off-Shore Contamination						Contaminant Source Areas and Transport Pathways					Evaluation of Remedial Action Alternatives			
Name	River side	River miles	Approximate Area (acres)	COIs	Lateral Extent	Vertical Extent	Transition Zone Water	Surface Water	Justification	Source Area	Storm-water	Ground-water	Bank Erosion	Justification	MNR	Treatability Studies	Recontami-nation	Justification
Gunderson / Shell	W	8.1 - 9.4	151.96	**yes** (VOCs [particularly off Area 1], dioxins?, Mn)	**yes** (behind Texaco dock & behind dock off Area 3)	**yes** (behind Texaco dock & south end of Area 3)	**yes** (waiting on TZW sample results off Area 1)	**no** (surface wtr concentrations should be able to be estimated by TZW & sed concentrations thru equilibrium partitioning)	**COI-** limited VOC and Mn data **L & V Extent**- limited samples behind docks, no sub data off James R., evaluating discharge from Outfall 18	**no** (Gunderson upland only) / **yes** (non-Gunderson property, i.e., potential sources contributing to OF 18)	**yes** (currently under investigation) (stormwater source control action will likely be required in Areas 2 & 3)	**yes** (currently under investigation & under source control action)	**yes** (currently under investigation) (bank source control action will likely be required in Areas 2 & 3)	**Source Area-** Potential sources contributing to OF18 not yet fully defined	yes	unknown	yes	depositional area
Fireboat / GE / Galvanizers / OFs 16 & 17	W	9.45 - 9.7	14.58	**yes** (dioxins?, otherwise, **no**, sediment samples were analyzed for full PH suite of COI)	**yes** (pending more thorough review of sediment data)	**yes** (pending more thorough review of sediment data)	**yes** (could be filled by equilibrium partitioning calculations)	**no** (surface wtr concentrations should be able to be estimated by TZW & sed concentrations thru equilibrium partitioning)		**yes** (potential sources contributing to OFs)	**yes**	**no**	**no**	**Source Area-** Potential sources contributing to OF not yet fully defined)				
Goldendale / UPRR	E	9.9 -10.1	6.65	**no** (sediment samples were analyzed for full PH suite of COI)	**yes** (pending more thorough review of sediment data)	**yes** (pending more thorough review of sediment data)	**yes** (could be filled by equilibrium partitioning calculations)	**no** (surface wtr concentrations should be able to be estimated by TZW & sed concentrations thru equilibrium partitioning)		**no / no**	**no** (Goldendale) / **yes** (UPRR)	**no / no**	**unknown**					
Outfall 47	E	9.5 -10.0	33.80	*(1)	*(1)	*(1)	*(1)	*(1)		**yes** (potential sources contributing to OF 47)	**yes**	**no**	**no**	**Source Area-** Potential sources contributing to OF not yet fully defined)				
Shipyard / Lagoon	E	7.5 - 9.0	168.52	**yes** (dioxins?, otherwise, **no**, sediment samples were analyzed for full PH suite of COI)	**yes** (lateral N&E fairly well defined, may need supplmental sediment data)	**yes** (vertical N&E faily well defined, may need supplemental sediment data)	**yes** (could be filled by equilibrium partitioning calculations)	**yes** (surface water transect needed at mouth of SI Lagoon to understand COI transport)	**Extent-** additional data for hot spot identification & to supplement definition of N&E	**no** (upland Shipyard) / **yes** (upland sources to SI Lagoon other than Shipyard)	**yes** (Shipyard stormwater will be investigated) **yes** (stormwater sources to SI Lagoon other than Shipyard)	**yes** (Shipyard GW currently under investigation) **yes** (upland GW sources to SI Lagoon other than Shipyard)	**yes** (Shipyard bank soil currently under investigation) **yes** (bank soil other than Shipyard)	**Stormwater**- expect significant loading to SI Lagoon via stormwater	yes	unknown	yes	depositional area
Willbridge	W	7.4 - 7.9	32.99	**no**	**yes** (lateral N&E fairly well defined, may need supplmental sediment data)	**yes** (vertical N&E faily well defined, may need supplemental sediment data)	**yes** (waiting on TZW sample results)	**no** (surface wtr concentrations should be able to be estimated by TZW & sed concentrations thru equilibrium partitioning)		**no**	**yes** (currently under investigation)	**yes** (currently under investigation)	**yes** (currently under investigation)					
Willamette Cove	E	6.3 - 6.8	26.74	**yes** (dioxins?, otherwise, **no**, sediment samples were analyzed for full PH suite of COI)	**yes** (lateral N&E fairly well defined, may need supplmental sediment data)	**yes** (vertical N&E faily well defined, may need supplemental sediment data)	**yes** (could be filled by equilibrium partitioning calculations)	**no** (surface wtr concentrations should be able to be estimated by TZW & sed concentrations thru equilibrium partitioning)		**no**	**yes** (currently under investigation)	**yes** (currently under investigation)	**yes** (currently under investigation)					
Marcom	E	5.5 - 5.8	8.25	**yes** (Mn)	**yes** (lateral N&E fairly well defined, may need supplmental sediment data)	**yes** (vertical N&E fairly well defined, may need supplmental sediment data)	**yes** (could be filled by equilibrium partitioning calculations)	**yes**	**Extent-** lateral extent towards the channel, vertical extent towards channel and Cathedral Park **Surface Wate**r- to understand source loading	**no** (N Parcel) **yes** (S Parcel) **yes** (upland off-site stormwater sources)	**yes** (upland off-site stormwater sources & potential S Parcel sources)	**no** (N parcel) **yes** (S Parcel)	**yes** (will need to be evaluated in both N & S Parcels)	**Sources & GW-** upland RI not complete for South parcel, **Stormwater-** loading, **Bank-**sand blast grit present in bank	yes	unknown	yes	MNR on fringes
Schnitzer Burgard	E	3.7 - 4.2	31.72	**yes** (dioxins?, PBDE)	**yes** (largely dependent on 2B cores)	**yes** (largely dependent on 2B cores)	**yes** (could be filled by equilibrium partitioning calculations)	**no** (surface wtr concentrations should be able to be estimated by TZW & sed concentrations thru equilibrium partitioning)	**COIs-** previous PBDE hit, dioxin possibly connected to PCBs	**no** (Schnitzer) **yes** (upland stormwater sources)	**yes** (stormwater currently under investigation)	**yes** (GW currently under investigation)	**yes** (currently under investigation)	**GW & Bank erosion-** dependent upon the completion of RI, **Stormwater-** potential significant migration pathway	yes	unknown	yes	MNR on fringes
OSM/ OF 53A	E	2.0 - 2.7	22.72	**yes** (Mn)	**yes** (lateral N&E fairly well defined, may need supplmental sediment data)	**yes** (vertical N&E fairly well defined, may need supplmental sediment data)	**yes** (could be filled by equilibrium partitioning calculations)	**no** (surface wtr concentrations should be able to be estimated by TZW & sed concentrations thru equilibrium partitioning)		**no** (OSM) **yes** (for sites other than OSM)	**yes** (currently under investigation at OSM) **yes** (for sites other than OSM)	**yes** (currently under investigation at OSM) **yes** (for sites other than OSM)	**yes** (currently under investigation at OSM) **yes** (for sites other than OSM)					
US Moorings	W	5.95 - 6.1	7.08	*(2)	*(2)	*(2)	*(2)	*(2)		*(2)	*(2)	*(2)	*(2)					
Crawford/ BES	E	5.9 - 6.2	5.03	**no** (sediment samples were analyzed for full PH suite of COI)	**yes** (lateral N&E fairly well defined, may need supplmental sediment data)	**yes** (vertical N&E fairly well defined, may need supplmental sediment data)	**yes** (could be filled by equilibrium partitioning calculations)	**no** (surface wtr concentrations should be able to be estimated by TZW & sed concentrations thru equilibrium partitioning)		**yes**	**yes**	**yes**	**yes**	**BES Lab**- DEQ neds to obtain & review the XPA to determine if any data gaps exist **Crawford St**- Beach sand removal not totally effective, DEQ needs to re-engage RP				
St. Johns West	W	5.65 - 5.9	4.64	**no** (sediment samples were analyzed for full PH suite of COI)	**yes** (lateral N&E fairly well defined, may need supplmental sediment data)	**yes** (vertical N&E fairly well defined, may need supplmental sediment data)	**yes** (could be filled by equilibrium partitioning calculations)	**no** (surface wtr concentrations should be able to be estimated by TZW & sed concentrations thru equilibrium partitioning)		**no** (Marine Finance property) **yes** (overwater structures)	**yes** (currently under investigation)	**no**	**no**					
Outfall 48	E	7.1 - 7.2	2.32	**no** (sediment samples were analyzed for full PH suite of COI)	**yes** (lateral N&E fairly well defined, may need supplmental sediment data)	**yes** (subsurface metals & PAH need further delineation)	**yes** (could be filled by equilibrium partitioning calculations)	**no** (surface wtr concentrations should be able to be estimated by TZW & sed concentrations thru equilibrium partitioning)	only City surface data available near outfall	**yes** (potential sources contributing to OF 48)	**yes**	**no**	**n+N11o**	**Source Area-** Potential sources contributing to OF not yet fully defined)	yes	unknown	yes	
Sultzer	W	10.2 - 10.4	6.30	**yes** (dioxins?, otherwise, **no**, sediment samples were analyzed for full PH suite of COI)	**yes** (lateral N&E fairly well defined, may need supplmental sediment data)	**yes** (subsurface metals & PAH need further delineation)	**yes** (could be filled by equilibrium partitioning calculations)	**no** (surface wtr concentrations should be able to be estimated by TZW & sed concentrations thru equilibrium partitioning)		**no**	**yes** (currently under investigation)	**yes** (currently under investigation)	**unknown**					
RPAC / Arkema	W	6.3 - 7.5	54.49	**no**	**yes** (lateral N&E fairly well defined, may need supplmental sediment data)	**yes** (subsurface metals & PAH need further delineation)	**yes** (waiting on TZW sample results)	**yes** (currently under investigation)		**no**	**yes** (currently under investigation)	**yes** (currently under investigation)	**yes** (currently under investigation)					
Northwest Natural (Gasco)	W	6.05 - 6.6	23.10	**no**	**yes** (lateral N&E fairly well defined, may need supplmental sediment data)	**yes** (subsurface metals & PAH need further delineation)	**yes** (waiting on TZW sample results)	**yes** (currently under investigation)		**no**	**yes** (currently under investigation)	**yes** (currently under investigation)	**yes** (currently under investigation)					
Time / Premier Edible Oil	E	3.45 - 3.7	6.85	**no**	**yes** (lateral N&E fairly well defined, may need supplmental sediment data)	**yes** (subsurface metals & PAH need further delineation)	**yes** (could be filled by equilibrium partitioning calculations)	**no** (surface wtr concentrations should be able to be estimated by TZW & sed concentrations thru equilibrium partitioning)		**yes** (curently under investigation)	**yes** (currently under investigation)	**yes** (currently under investigation)	**yes** (currently under investigation)					
S-5 outfall	E	9.25 - 9.3	1.48	*(1)	*(1)	*(1)	*(1)	*(1)		**yes** (potential sources contributing to OF S5)	**yes**	**no**	**no**					
Siltronic chlorinated VOCs	W	6.4 - 6.45	0.68	**no**	**no**	**no**	**no**	**yes** (currently under investigation)		**yes**	**yes** (currently under investigation)	**yes** (currently under investigation)	**no** (for Siltronic's HVOC release)					
Triangle Park	E	7.3 - 7.5	12.27	**no**	**yes** (lateral N&E fairly well defined, may need supplmental sediment data)	**yes** (subsurface metals & PAH need further delineation)	**yes** (could be filled by equilibrium partitioning calculations)	**no** (surface wtr concentrations should be able to be estimated by TZW & sed concentrations thru equilibrium partitioning)		**no**	**no**	**yes** (currently under investigation)	**no**					
Downstream PAHs	W	3.1 - 6.9	292.28	**yes** (PAH fingerprinting?)	**yes**	**yes**	**yes** (could be filled by equilibrium partitioning calculations)	**no** (surface wtr concentrations should be able to be estimated by TZW & sed concentrations thru equilibrium partitioning)	attempting to further identify hot spots and local sources of PAHs, define extent into the Willamette River channel and Multnomah channel	**not applicable**	**not applicable**	**not applicable**	**not applicable**		yes	unknown	yes	
Downstream DDT	W	3.1 - 6.3	90.49	**yes** (potential fingerprinting needed to distinguish certain Arkema COIs from RPAC COIs)	**yes**	**yes**	**yes** (could be filled by equilibrium partitioning calculations)	**no** (surface wtr concentrations should be able to be estimated by TZW & sed concentrations thru equilibrium partitioning)		**not applicable**	**not applicable**	**not applicable**	**not applicable**					
Site-Wide PCB and DDT	Both	2.0 - 11.0	2080.00	**yes** (dioxin?, PBDE, Mn)	**yes**	**yes**	**yes** (could be filled by equilibrium partitioning calculations)	**no** (surface wtr concentrations should be able to be estimated by TZW & sed concentrations thru equilibrium partitioning)	extent should look downstream (including Multnomah channel) and upstream	**yes**	**yes**	**yes**	**yes**	complete upland source ID and link to inwater data	yes	unknown	yes	

Notes:

Data gaps identified as yes, no, unknown or not applicable
Contaminant transport data gaps generally to be addressed by upland facilities

Footnotes

*(1) Potential upland source area(s) not in DEQ's Cleanup Program therefore these potential data gaps should be defined by EPA/partners team
*(2) EPA is lead for upland investigation therefore these potentail data gaps should be identfied by EPA/partners team

"Stormwater" includes runoff directed to conveyance systems & overland runoff (i.e., sheetflow)